

Application Number 10/534,633  
Amendment dated August 3, 2006  
Response to Office action of May 5, 2006

**Remarks/Arguments**

**Claims Rejections – 35 USC 102(e)**

Claims 1-4, 6-10, 12-16 and 18-21 stand rejected under 34 USC 102(e) as being anticipated by Martsinovsky et al. (6,876,123).

It is clear from the present application that the insulator layer covers the collector electrode surface (see Fig. 2b), whereas the insulator layer in Martsinovsky only partially covers the collector electrode surface (see Figure 1d of Martsinovsky and claim 1 of Martsinovsky).

Applicant has therefore amended claims 1 and 8 of the present invention and now believes that what is claimed in claims 1-4 and 12-14 is not anticipated by the disclosure of Martsinovsky.

It is also clear from the present invention that there exists a gap between the emitter electrode and the insulator layer, i.e.,  $d_1$  is greater than zero.

Applicant has therefore amended claim 15 of the present invention and now believes that what is claimed in claim 15 is not anticipated by the disclosure of Martsinovsky.

Claims 16 and 18-21 of the present invention are dependent on claim 15, and whilst Martsinovsky supposedly discloses an insulator layer comprising a metal oxide or aluminum oxide, an emitter electrode comprising a metal, a collector electrode comprising a metal, and a separation between the collector and emitter electrodes of 40 Å, he does not disclose a situation where the insulator layer and the emitter electrode are separated by a non-zero distance  $d_1$ , which is a limitation of amended claim 15.

Applicant does not therefore agree that what is claimed in claims 16 and 18-21 of the present invention is anticipated by Martsinovsky.

Applicant therefore respectfully requests that Examiner withdraw his objections to claims 1-4, 6-10, 12-16 and 18-21 as being anticipated by Martsinovsky et al. (6,876,123) under 34 USC 102(e).

Application Number 10/534,633  
Amendment dated August 3, 2006  
Response to Office action of May 5, 2006

**Claims Rejections – 35 USC 103**

Claims 5, 11, and 17 stand rejected under 34 USC 103 as being unpatentable over Martsinovsky in view of Tavkhelidze et al. (6,417,060).

In view of the amendments made to claims 1, 8 and 15 and the corresponding arguments made above Applicant believes that the present invention is patentable over the prior art of Martsinovsky and Tavkhelidze.

Whilst Tavkhelidze supposedly teaches a separation between an emitter electrode and a collector electrode of 50Å it is clear from the teaching of Martsinovsky that the distance between the emitter layer and the insulator layer ( $d_1$ ) is zero (see Figure 1d of Martsinovsky), not 5-50Å as taught in claims 5, 11 and 17.

Applicant therefore respectfully requests that Examiner withdraw his objections under 34 USC 103 to claims 5, 11, and 17 as being unpatentable over Martsinovsky in view of Tavkhelidze et al. (6,417,060).

Applicant respectfully submits that this application, as amended, is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that discussing the application over the telephone might advance prosecution, Applicant would welcome the opportunity to do so.

Respectfully submitted,

  
Avto TAVKHELIDZE  
Inventor